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12/13/05

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INTELLECTUAL PROPERTY LAW

To:	U.S. Patent & Trademark Office	From:	Ronald E. Smith
Attn:	Nicholas Ponomarenko Unit-2834	Client:	1372.68.PRC
Fax:	571-273-2033	Pages:	2 including coversheet
Phone:		Date:	December 12, 2005
Re:	USSN: 10/605,497	CC:	University of South Florida

☐ Urgent ☑ For Review ☐ Please Comment ☐ Please Reply ☐ Please Recycle

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U.S. PATENT ATTORNEYS

Memo

(571).273-2033

To: Nicholas Ponomarenko

From: Molly Sauter

Date: 6/17/2005 @ 10:44 AM

Our Ref: 10/605,497

Re: Withdrawal of Notice of Allowance pending additional information from applicant

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Examiner Ponomarenko,

I understand that you have requested additional information from the applicants of U.S. Patent Application No. 10/605,497 relating to the application of Boyle's Law in the present invention.

The application is directed to a method that includes mechanical actuation provided by the pressure generated as a result of a phase change of a material that is confined to a specific volume. Boyle's law states that:

PV=kT, or pressure times volume is equal to a constant times temperature.

So, if one of the variables (P,V or T) changes that at least one of the other variables must also change to maintain the equivalency. So, in the case of the invention, a phase change material is placed in a confined (i.e. constant volume) space. The phase change material is then actuated using one of a variety of means as stated in paragraph [0038] of the specification, including thermal actuation. The actuation of the phase change material causes an increase in pressure because the volume is constant.. Boyle's law does not state that the temperature must be constant. The constant, "k" in the equation is dependent upon the units used for the other quantities but once the units are fixed, k is also fixed. This is not equivalent to the statement that the temperature, "T" , must remain constant for Boyle's law to apply. In summary, Boyle's law does not require that the explosive reaction occur at a constant temperature.

I hope this resolves this issues with this application and the Notice of Allowance will stand. If you have any questions, please contact me at (727) 507-8558 or molly.sauter@baypatents.com.

Thanks,

Molly Sauter

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